Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, DC 20554

In the Matter of:	)	
	)	
Amendment of Part 97 of the Commission's	)	
	)	RM-11306
Rules Governing the Amateur Radio Service	)	
	)	
Concerning Permitted Emissions and Control	)	
	)	
Requirements	)	

Comment of Philip E. Galasso, K2PG

1. Background and Introduction

I, Philip E. Galasso, have been a licensed radio amateur since September 27, 1968 and a holder of the Amateur Extra Class license since April 16, 1976, currently with the station callsign K2PG. I use most of the emission modes permitted on the amateur bands from 1800 kHz through 450 MHz. I have held the First Class Radiotelephone Operator License (now the General Radiotelephone Operator License) since 1973 and am employed as the chief operator of AM broadcast station WARM and FM broadcast stations WBHD, WBHT, WBSX, WMGS, and WSJR in the Wilkes-Barre/Scranton area of Pennsylvania. I also hold a station license in the Experimental Radio Service with the callsign KA2XUK for the purpose of exploring propagation on the 160-190 kHz band.

On November 14, 2005, the American Radio Relay League, Inc. ("ARRL"), which promotes itself as "the National Association for Amateur Radio", submitted a Petition for Rulemaking ("Petition") seeking to replace the current regulations in Part 97 of the Commission's Rules governing emission subbands with regulations prescribing frequency subbands defined by occupied bandwidth. ARRL also proposes to relax the control requirements for certain types of amateur radio stations using digital emissions.

2. Discussion

In a rather presumptuous attempt to represent itself as the voice of the amateur radio community in the United States, ARRL calls itself the "National Association for Amateur Radio"[1]. According to statistics derived from the Commission's databases, there are currently 719,813 licensees in the Amateur Radio Service, excluding club stations.[2] Current membership in the ARRL is 151,727.[3] This means that only 21% of all individual amateur radio licensees are members of ARRL, meaning that ARRL and its positions on regulatory matters are hardly representative of the amateur radio community as a whole.

A. The Bandwidth Issue

ARRL correctly states that, "The Amateur Radio Service rules limit emission types that can be deployed in the Amateur Service. The reason for this is largely historical, rather than practical".[4]

---

[1] Petition, Page 1

[2] http://www.hamdata.com, January 10, 2006. This site uses data from the Wireless Telecommunications Bureau database.

[3] ARRL, *2004 Annual Report,* Page 4. This is the latest *Annual Report* that is currently available.

[4] Petition, Page 2

ARRL further states, "In order to encourage the implementation of new technologies in the Amateur Radio Service, the rules must be modified to more flexibly accommodate use of such technologies. The philosophy espoused herein is to regulate bands by maximum bandwidth rather than specific or defined emission modes."[5] ARRL then claims, through the changes proposed in its Petition, to make the regulations governing amateur radio less cumbersome while not prohibiting or restricting current amateur radio technologies or emission modes.[6] However, ARRL then substitutes a crazy quilt of nitpicking restrictions on occupied bandwidth, prescribing subbands within each amateur radio frequency band for an assortment of bandwidths ranging from 200 Hz to 3.5 kHz in the 1.8 to 24 MHz bands. Wider bandwidths are proposed for amateur frequencies above 29.0 MHz.[7] Obviously, ARRL seeks to substitute one set of onerous regulations for another in calling for government-mandated subbands within each amateur radio band, whether these subbands are defined by emission type or by occupied bandwidth. As justification, ARRL states, "Because there is a *strong tradition* in the United States of restricting subbands by rule rather than purely through voluntary band plans, complete elimination of regulatory band segments and complete reliance on informal band planning does not appear to be a suitable option in the United States"[8] (Italics supplied). This attitude is at best condescending and insulting to American amateur radio operators. Does one become incapable of following a band plan, respecting other types of amateur radio operation, or simply showing common courtesy, as soon as he or she crosses the border into the United States? If our colleagues in Canada[9] and most other countries of the world can operate without government-mandated emission (or bandwidth) subbands, as we currently do on the 1.8-2.0 MHz band, do we

---

[5] Ibid.

[6] Ibid.

[7] Petition, Appendix A, Page 23

[8] Petition, Page 9

[9] Industry Canada Radio Information Circular, RIC-2, Issue 5, July, 2005, Page 6

Americans really need to have a "Mommy, may I?" type of regulatory structure for our other bands? The existence of a "strong tradition" of overregulation of the Amateur Radio Service does nothing to justify its continuation. There was a "strong tradition" of slavery and racial discrimination in certain states. Did that justify retention of those practices?

B. ARRL Contradicts Itself Regarding Current Emission Modes

In the introduction to its Petition, ARRL states that its proposed rule changes will make it easier for new types of emissions to be introduced "without prohibiting or significantly restricting use of current Amateur radio technologies and emission modes".[10] While there is a significant number of amateur radio operators who enjoy operating double-sideband amplitude modulation (DSB-AM, Type A3E emission) and restoring vintage radio equipment[11], the bandwidth restrictions proposed in the Petition would expressly prohibit such transmissions on amateur frequencies below 29.0 MHz. The 28.0-29.7 MHz band is useless for anything other than strictly local communications except during sunspot maxima. ARRL later states that the proposed rule changes would permit DSB-AM under a *footnote* contained in the appendix to its Petition.[12] Such footnotes can easily be deleted, disenfranchising an entire segment of the Amateur Radio Service. ARRL then states, "On the other hand, the current provision in the Amateur Rules generally permitting Independent Sideband is removed, since that emission mode is not in current use in the Amateur Service..."[13]. Does that mean that amateur radio operators should be prohibited from experimenting with independent sideband emissions in the future on frequency bands that are suitable for long-distance communications

---

[10] Petition, Page 2

[11] *Radio World* magazine, July 8, 2000

[12] Petition, Appendix A, Pages 23 and 24

[13] Petition, Page 12

throughout the sunspot cycle? Clearly, ARRL contradicts itself here. In its Petition, ARRL asks the Commission to deregulate the Amateur Radio Service, then asks the Commission to substitute a set of equally complex and burdensome regulations.

C. HF Data, RTTY, and Semi-Automatic Control

In its proposed amendments to Section 97.221 of the Commission's Rules, ARRL proposes to permit semi-automatic control of stations transmitting data or radioteleprinter (RTTY) communications throughout the amateur allocations below 30 MHz.[14] This has a great potential for causing interference to other communications already in progress on those frequencies. "Semi-automatic control" is defined as a mode of operation "where a station which is automatically controlled cannot initiate transmissions" but "all communications must be initiated by a station under local or remote control by a control operator".[15] Due to the existence of "skip zones" on the HF bands, the operator of the station initiating these communications may not be able to hear communications that will receive interference from the automatically controlled digital robot. An example of semi-automatic control in analog voice communications is the FM repeater. For good reason, such repeater stations are restricted to frequencies in segments of the bands above 29.5 MHz.[16] To avoid mutual interference, such repeater stations are coordinated by frequency and coverage area, while simplex operations are carried out on frequencies not used by local repeaters. Clearly, *any and all* stations under semi-automatic control should be defined as repeaters, regardless of whether they are retransmitting analog or digital communications, either on a delayed or real-time basis. They should therefore be restricted to frequencies above 29.5 MHz.

---

[14] Petition, Pages 13-14

[15] Petition, Page 13

[16] Section 97.205 (b), FCC Rules

3. A Counterproposal and Conclusion

A far more sensible approach to amateur radio regulation than that proposed in the ARRL Petition may be seen in the Canadian regulations governing amateur radio. In Schedule I, which lists the frequency bands allocated to amateur radio stations in Canada, *no* emission types are specified at all. Nor are these frequency bands segmented into subbands. The Canadian regulations specify a maximum bandwidth *for each entire band.* For example, the maximum bandwidth permitted on the bands 1.8 through 24.990 MHz is 6 kHz (1 kHz on 10.100-10.150 MHz).[17] To facilitate experimentation with a wide variety of analog and digital communications (not just J3E analog emission and the "digital mode *du jour*"), I would propose a maximum bandwidth of 9 kHz on the 1.8 through 24.990 MHz bands, with a 1 kHz bandwidth limit on the 10.100 to 10.150 MHz band. Semi-automatically controlled stations, however, should be treated as repeaters and limited to frequencies above 29.5 MHz.

4. Appendix

The following are suggested changes to Part 97 of the Commission's Rules:

97.305 Authorized Emissions

(a) An amateur station may transmit any emission within the bandwidth limits specified in Paragraph (c), below, on frequencies authorized to the control operator. The bandwidth of a signal shall be determined by measuring the frequency band occupied by that signal at a level that is 26 dB below the maximum amplitude of that signal.

(b) A station may transmit a test emission on any frequency authorized to the control operator for brief periods for experimental purposes. (Remainder deleted)

---

[17] Industry Canada Radio Information Circular, RIC-2, Issue 5, July, 2005, Page 6

(c) A station may transmit on the frequencies indicated, subject to such frequencies being authorized to the control operator:

Wavelength band	Frequencies	Maximum bandwidth authorized
160 m	1800-2000 kHz	9 kHz
80 m	3500-4000 kHz	9 kHz
60 m[18]	5167.5 kHz	2.8 kHz
60 m[19]	5332, 5348, 5368, 5373, 5405 kHz	2.8 kHz
40 m	7000-7300 kHz	9 kHz
30 m	10.100-10.150 MHz	1 kHz
20 m	14.000-14.350 MHz	9 kHz
17 m	18.068-18.168 MHz	9 kHz
15 m	21.100-21.450 MHz	9 kHz
12 m	24.890-24.990 MHz	9 kHz
10 m	28.0-29.7 MHz	20 kHz
6 m	50.0-54.0 MHz	30 kHz
2 m	144.0-148.0 MHz	30 kHz
1.25 m	222-225 MHz	100 kHz
70 cm	420-450 MHz[20]	12 MHz
33 cm	902-928 MHz	12 MHz
23 cm	1.240-1.300 GHz	Not specified
13 cm	2.300-2.310 and 2.39-2.45 GHz	Not specified
9 cm	3.300-3.500 GHz	Not specified

[18] Operation on this frequency is restricted to stations in the State of Alaska, using J3E emission only.

[19] Operation on this band is restricted by the NTIA to five specific channels, J3E emission only, at 50 watts PEP.

[20] The frequencies 420-430 MHz are not available for amateur use north of Line A.

5 cm	5.650-5.925 GHz	Not specified
3 cm	10.0-10.5 GHz	Not specified
1.2 cm	24.00-24.25 GHz	Not specified
6 mm	47.0-47.2 GHz	Not specified
4 mm	75.5-81.0 GHz	Not specified
2.5 mm	119.98-120.02 GHz	Not specified
1 mm	241-250 GHz	Not specified
	All above 300 GHz	Not specified

97.307 Emission Standards

(f) (Deleted)

97.309 (Deleted)

97.311 (Deleted)

Dated this 12th day of January, 2006

By: **Philip E. Galasso, K2PG**
635 State Route 239
Shickshinny, PA 18655